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ABSTRACT

This paper analyzes how philosophy enters into inquiry in teacher education, in writings by both philosophers and nonphilosophers. Examples illustrate philosophical activities (such as conceptual and logical analysis, positing and explaining distinctions, evoking shared ideas and values), as well as showing that philosophy plays an important part in arguments not obviously philosophical. Commentary clarifies ways in which people can be moved to do philosophical inquiry, how much inquiry can be carried out, and how its quality may be judged. Authors whose work is discussed include Buchmann, Combs, Dewey, Gage, Scheffler, Shulman, Wilson, and Zeichner. (Author)

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Robert E. Floden and Margret Buchmann

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National
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PHILOSOPHICAL INQUIRY IN TEACHER EDUCATION

Robert E. Floden and Margret Buchmann

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Abstract

This paper analyzes how philosophy enters into inquiry in teacher education, in writings by both philosophers and nonphilosophers. Examples illustrate philosophical activities (such as conceptual and logical analysis, positing and explaining distinctions, evoking shared ideas and values), as well as showing that philosophy plays an important part in arguments not obviously philosophical. Commentary clarifies ways in which people can be moved to do philosophical inquiry, how much inquiry can be carried out, and how its quality may be judged. Authors whose work is discussed include Buchmann, Combs, Dewey, Gage, Scheffler, Shulman, Wilson, and Zeichner.

PHILOSOPHICAL INQUIRY IN TEACHER EDUCATION[1]

Robert E. Floden and Margret Buchmann[2]

> Philosophical discussion is the bringing out of latent opposing forces, like arriving at a decision and not like learning what is behind a closed door or whether 235 x 6 = 1420. (Wisdom, 1969, p. 181)

No sharp boundary separates philosophical inquiry in teacher education from other forms of inquiry. Studies that make prominent use of philosophical methods also often draw on other branches of inquiry and knowledge, such as the social sciences and common sense. Because writers seldom alert readers to all the types of inquiry or knowledge they draw on, and because much of philosophical method is a refined version of reasoning that all people do, the philosophical component of a study often goes unnoticed. If philosophical dimensions of inquiry remain unnoticed, they are less likely to be critically examined by readers, or improved by writers.

In this paper, attention is called to philosophical inquiry, in writings by both philosophers and nonphilosophers. Examples illustrate philosophical activities (such as conceptual and logical analysis, positing and explaining distinctions, evoking shared ideas and values), as well as showing that philosophy plays an important part in arguments not obviously philosophical. Commentary included here on these examples clarifies ways in which people can be moved to do philosophical inquiry, how such inquiry can be carried out, and how its quality may be judged. A few articles or chapters have appeared in which professional philosophers have written about teacher education, as philosophers. Most of these will be discussed, but wider boundaries will be drawn around philosophical inquiry in teacher education, including works by nonphilosophers that contain a significant philosophical component. This paper is not, however, a comprehensive review of this very broadly defined domain. It is too large to cover thoroughly and too difficult to locate precisely. Since it includes work on a great variety of subjects, standard bibliographic search methods are not of much help. It is possible to identify sets of papers on topics likely to include philosophical inquiry (e.g., work on program purposes), but many of these will not include much philosophical inquiry, and much other work would still be left out. Therefore, only selected papers by nonphilosophers are included, chosen because they provide good examples of the philosophical activities discussed. Analyses of educational research in its

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[1]This will be a chapter in W. R. Houston (ed.), *Handbook of Research on Teacher Education* (New York: Macmillan).

[2]Robert Floden is professor of teacher education and educational psychology and Margret Buchmann is professor of teacher education at Michigan State University. Floden is associate director of the National Center for Research on Teacher Education; Buchmann is a senior researcher with the Institute for Research on Teaching. The authors wish to acknowledge David K. Cohen, Paul Hirst, C.J.B. Macmillan, John Sikula, and Karen Zumwalt who provided helpful and (fortunately) consistent comments on an earlier draft, which led to substantial changes in the paper.

relations to teaching and teacher education are a notable omission (see, e.g., Buchmann, 1984a; Floden, 1985; Zumwalt, 1982).

Like any inquiry, philosophical inquiry depends for its quality on aspects of substance as well as method. Indeed, no amount or degree of skill in analysis, for instance, can make up for paucity, thinness, or irrelevance of ideas and questions. And, while one can, to some extent, train people in the use of methods, it is much less clear how the substantive quality of analyses and proposals might be assured or improved. Recollection and reinterpretation may play at least as important a role in this as invention. In their different ways, most of the essays and chapters discussed remind one of systems and traditions of thought: by drawing attention to the meaning of concepts used in everyday life, by evoking shared ideas and beliefs in human goods, and by renewing connections with works of literature and the philosophy of John Dewey.

How Is Philosophical Inquiry Different From Other Forms of Inquiry?

Philosophy is a field whose domain has been gradually narrowed as more and more of its areas broke off as independent disciplines. The natural sciences separated early; the separation of philosophy from psychology is only about a century old. Still, boundaries remain blurred, for most disciplines, as well as professions, admit to at least a foundational philosophical component (including conceptual clarification and ethics). The farther reaches of quantum mechanics may be considered as much philosophy as physics; cognitive science explicitly reunites psychology and philosophy, with the addition of computer science. Similarly, a course on the history of educational thought might easily be classed as a history of educational philosophy. Curriculum theory builds on philosophical categorizations of types of knowledge and the purposes of education.

Despite this blurring of boundaries, two types of work in teacher education seem clearly philosophical. The first is inquiry addressed to normative questions, including both specific questions about right and wrong (e.g., Is it right to use physical punishment in schools?) and general questions about the goods teacher education is supposed to advance or its aims (e.g., Should teacher education prepare teachers to change "the system," or to work effectively in existing schools?). Such inquiry often works by reminding people of what they already have in mind, of shared values and ideas, either by analyses of concepts in ordinary language or by reference to texts that are part of a tradition. To be sure, attempts to answer normative questions will often include nonphilosophical inquiry (e.g., finding out what "the system" is); and they depend for their point, at least in part, on aspects of reality requiring understanding or change (e.g., legality and occurrence of physical punishment in schools). Since philosophical inquiry in teacher education bears on the nested social practices of schooling and teaching teachers, it will typically concern questions that mix facts and values.

A second type of work is inquiry that critically examines the assumptions and logic of some aspect of teacher education thought and practice. One might, for example, go through a recent commission report on teacher education, trying to sort out the arguments (or lack of arguments) behind the report's conclusions, their grounding in facts or reason, compatibility or incompatibility with one another, and their implicit assumptions. By considering the justification and logic of claims, philosophical inquiry makes a reasoned assessment possible. Likewise, a prevalent practice--such as giving teachers field experience--might be examined, with an eye to its underlying assumptions as well as its likely effects and the extent to which these assumptions and consequences are defensible (see, e.g., Feiman-Nemser and Buchmann, 1985; Zeichner, 1980).

Different activities and kinds of background knowledge are required for such analyses. First, philosophical inquiry often relies on analyses of language or concepts. Inquiry will focus on terms that seem to play an important role in an argument or practice, trying to answer the question, What do these words or phrases mean or entail? An answer will not be found simply by consulting a dictionary, though the definitions and contexts of usage listed in a good dictionary are often a fruitful starting place.

From that starting place, the inquiry will proceed to examine linguistic intuitions about the term and its associations and implications, then look at how the term seems to be used in the context of interest, and what that usage suggests for thought and practice. In teacher education, the term "liberal education," for example, has been a fertile ground for philosophical debate. "Teaching" and "education" are concepts to which philosophers of education have devoted numerous articles and professional meetings. Following, conceptual analysis will be illustrated with an example from the work of John Wilson.

A second, not unrelated, activity consists in examining the logic and assumptions of an argument, policy, or practice. The basic approach is to identify what might be considered the conclusion of an argument, leading to a principle or practice, then to attempt a reconstruction of that argument, sticking as closely as possible to its presuppositions and the reasons provided by the author, policymaker, or practitioner. These reasons and their connections can then be critically examined, with special attention to logical flaws and the assumptions that might be called into question. Again, assumptions and reasons can bear on facts and values, involving statements about the world and ideas about what is desirable or right. The result of this inquiry might be presented as a critique, a new argument, or a practical proposal; each may refer to the inadequacies of competing lines of thought or practice. A clear example here is Scheffler's (1968) essay on the contributions of theoretical studies of education to the preparation of teachers.

Background knowledge is also important. It concerns both knowledge of the real world--of practices, institutions, policies, and proposals as well as their probable or observed consequences--and philosophical and other kinds of literacy. Like all inquiry, philosophical

inquiry often works by recognizing the similarities between problems or ideas and exploring how previous understandings might shed light on a current question or situation. Particular situations may be new, but ways to think them through may be strongly suggested by earlier discussions or texts. For instance, proposals for research utilization in teacher education and teaching may be a recent phenomenon. Yet Dewey's critique of a narrow, performance-oriented preparation for teachers, developed from a reasoned conception of the purposes of practice in teaching teachers, dates back to the beginning of the century and can be readily applied to current practices and policies.

The philosophical activities of inquiry into human goods, appeals to shared beliefs, conceptual clarification, criticism of arguments, and establishment of distinctions and category systems are part of all academic fields and everyday life. These activities respond to and express the human need for understanding objects, concepts, and events, and for realizing ideals. Thoughtful politicians may go to some pains to understand exactly what they commit themselves to when they promise not to raise taxes. Did the context make clear that they were referring only to income tax? Is eliminating a deduction raising taxes or merely closing loopholes? The patient listening to a doctor's authoritative recommendation for surgery may have the presence of mind to probe the logic that led to the conclusion and to question the assumptions that the doctor made about how risks should be weighed.

Hence, unlike statistical analysis or electrical engineering, philosophical inquiry is not the province of experts. All people ask philosophical questions like, What is the good of this? How do you know? What do you mean?--and practice philosophical inquiry until they have reached *some* clarity or are overtaken by the need to act.

> Philosophy is not a body of privileged knowledge, nor a creed, nor a special mode of insight or expertise. . . . It is not an esoteric undertaking, concerned with the solution of logical puzzles mainly or with dramatizing the pathos of life, the anguish, or the despair. (Greene, 1981, p. 34)

Philosophical questions "are complex but *informally* complex, like the dilemmas and difficulties of ordinary life and not like problems that yield to well disciplined formal thought or well directed observation or experiment" (Bambrough, 1986, p. 65). Philosophical amateurs may not be aware of historical lines of argument, but they often have a clear grasp of the practical contexts that generate philosophical questions and in which some specific resolution must operate.

Philosophical inquiry in teacher education attempts to address informally complex questions by considered reasoning--which appeals to shared ideas and may incorporate empirical evidence--careful argument, analysis or establishment of distinctions in fact or language. While implying or presenting some substantive position, its mark is also an

attitude which acknowledges (in principle, if not always in practice) that no case is immune to challenge.

In the following sections, several articles, chapters, and monographs will be considered in groupings organized according to the role occupied by philosophical activities. In the first set, inquiry is primarily or exclusively philosophical, relying either on linguistic analysis or critical examination of a conclusion or recommendation. In the second set, philosophical inquiry is integrated with empirical claims, so that strengths and weaknesses of the work depend both on the philosophical component and on the grounds for assertions about the real world.

In the third set, authors invoke philosophical and other kinds of background knowledge, reminding people of the insights of others (e.g., Dewey) and of shared ideals in the course of making a plea for action. These authors also include empirical claims in their arguments. In the final set, authors establish distinctions, sorting out components of a concept like teacher knowledge (with supposed implications for teaching teachers) or proposing different ways of looking at a practice like giving novices field experience (with different associated goals and likely consequences).

Commentary provided in this paper points out what it is that the authors seem to be doing and provides some assessment of how well that is being done. These discussions should be helpful in showing what arguments can be mustered on some question in teacher education, how those arguments differ from one another, what they may accomplish, and how they may be examined. The purpose is to increase insight into, and use of, philosophical dimensions of research on teacher education.

Pure Philosophical Analysis

Unpacking the Concept of "Teacher Education"

John Wilson is a professional philosopher of education who has made frequent use of linguistic analysis to argue for educational practices. When examining the question of what teacher educators ought to do (Wilson, 1975), he asks, What do we mean by "teacher education"? The use of these words, Wilson argues, commits people to some courses of action in preparing teachers and rules out others. The meaning (or logic) of the concepts used provides guidance for action and seeing the world, provided people stop to think about what they mean when they talk about doing "teacher education."

Wilson's method is a large part of his message; and he associates that method, not with academic scholarship and technical language but with common sense and seriousness--things that all people are capable of possessing. He claims, moreover, that everyday language, with its embedded distinctions, is a "repository" of human interests:

> We do in fact have quite a sophisticated "ordinary language.". . . Much of the clarity we need is *already enshrined* in our language, if only we will take its terms and distinctions seriously: it represents important interests and concerns which it has been evolved to describe and identify. . . . The position in education, or indeed the study of human beings generally, is not that we are already quite clear about distinctions made in ordinary language and can move on to new ground: it is rather that we are not clear--not, at least, consciously and explicitly clear--about the concepts and distinctions we already have. (Wilson, 1975, p. 177)

Wilson points out that there is ambiguity already in the term "teacher education." Since it can mean the education of teachers *as* teachers or the (general) education of people who also happen to be teachers, he suggests the term "teacher preparation." Still he thinks that one cannot help bringing in the concept of education, for it is reasonable to assume that teachers are prepared with a view to their purveying education to children, which is the distinctive point of their work. Education can be conceived of plainly as people learning things, with the proviso that the result is an improvement in their state of mind, such as greater rationality, and less prejudice or ignorance.

Saying that the class of benefits or goods associated with education has to do with increasing knowledge and understanding is stating the obvious. This reminder, however, helps people to be clear about the crucially important distinction between those goods and ends that are properly educational and those related to heterogeneous other agendas, such as personal well-being, economic welfare, or social progress. A failure to make this distinction will badly serve both educational and other ends. Perhaps the most likely thing to happen is that political or social interests come to dominate over educational ones.

In practice, Wilson argues, the question is quite simply *how we view the child*; to be interested in education, he emphasizes, is to view that child "primarily as a *learner*: to have in mind the process and benefits of learning and understanding and knowledge themselves, rather than other goods--whether or not some of these other goods may be, indirectly, achieved by learning" (Wilson, 1975, p. 44).

The point is not to discredit or disregard more far-flung social and political agendas, but to establish some solid conceptual ground for discussing teacher preparation by distinguishing such agendas from the purpose built into the word "teacher":

> It is not conceptually part of "being a teacher" to improve pupils' social or economic chances nor to ensure that they are qualified in various ways to enter various jobs or institutions nor to alter their home background, physical condition, or relationship to "society" nor to dispense particular "social values." (Wilson, 1975, pp. 105-106)

Unless educators are clear about the point of teaching, Wilson warns, they will remain hopelessly muddled. Conversely, identifying the conceptual core of being a teacher provides some well grounded guidance for teacher education.

In making sense of teacher preparation, one cannot derive its conceptual core from the concept of teaching itself. "Teaching" (which is something everyone does some of the time) is not the same as "being a teacher." There are other and broader conceptual concerns that come into the picture, for "being a teacher" entails people (teachers) working in organizations (schools) with other people (pupils) in order to get these other people to learn something (to be educated). The job of "seeing to it that other people learn things" can furthermore be accomplished not only by teaching but also by motivating people or giving them learning materials.

Proceeding to sort out what being a teacher logically requires, Wilson attempts a taxonomy of characteristics that is straightforward, though by no means trivial. The concept of being a teacher entails that people must acquire these characteristics to be teachers, though it does not follow that they must be part of formal preparation. First, there is knowledge of the subject matter. A teacher must be "inside" his subject to see to the learning of others:

> He must know his subject in a way that is most useful for the learning of his pupils; and whilst of course this will usually include possessing a good deal of relevant *information*, we should more naturally stress the idea of having a clear understanding of what it is to make progress in the subject--the type of reasoning involved, its logical structure, the marks of "a good historian" (scientist, mathematician, etc.), and so forth. (Wilson, 1975, p. 111)

Educating others also involves, according to Wilson, displaying and dispensing a serious caring about one's subject. Subject matter knowledge alone does not suffice for teachers, who are in the business of improving *people*. In other words, the teacher must not only know mathematics or history but also be committed to those forms and pursuits of understanding and get others to share that commitment. This interactional component of what teachers do also presupposes some knowledge of people; and, in general, teaching as getting others to learn things requires capacities for personal understanding and dealing with people. It is unlikely that either commitment to one's teaching subjects or knowledge of people can be acquired solely by training; hence the need for teachers to be *educated* follows from all three characteristics that they have to acquire to do their work.

Does the vital practical job of teaching, however, require knowing educational theory or educational research? Wilson maintains that this depends on whether such knowledge--in its given state, focus, or mode of instructional use--helps teachers to be more educated. If it is not sound, related to being a teacher, and does not rise above the level of common

sense or, worse, obfuscates natural understanding (as a basis for seriousness), such knowledge should be dismissed.

Can the three central characteristics in respect to which teachers need to be prepared by education be acquired through practice in schools? Since teachers cannot "copy" a master teacher's subject knowledge but must acquire it themselves, nor be "apprenticed" to seriousness or "imitate" understanding people, the answer is clear: Practice is no solution to the problems of teacher preparation either. While actually being in a classroom does foster the development of the necessary know-how and contextual knowledge, teaching practice in itself does not address the primary educational needs of teachers.

In considering the curriculum of teacher preparation, Wilson concludes, it is not the supposed relation of theory and practice or the allocation of time to either domain but the development of people who are serious and conceptually alert to educational ideas and practices that is the problem. Issues of content and modes of teacher learning can be decided after clarifying the prior questions: "What sophisticated *ways of looking at people learning* can we initiate intending teachers into? or "In what ways can we sharpen their perceptions and understanding for the dispensation of learning (education)?" [Wilson, 1975, p. 127].

Wilson's argument illustrates the potential that conceptual analysis has for using implicit understandings of the words already used to provide guidance for thought and action. If people say they want to prepare teachers for their work and mean it, then a careful examination of what education means can be revealing. Wilson argues that the core meaning of "teacher preparation" is getting people to know their subjects and to care about them, to be serious and conceptually alert. And he maintains that the acquisition of these characteristics requires education, rather than training or classroom practice. These conclusions are reasonably specific and are significantly different from what happens in much of teacher education practice.

One must note, however, that Wilson relies on his own linguistic intuitions to guide him. He has not interviewed teacher educators to find out what they mean by terms such as "teacher preparation." Some common meaning seems reasonable to assume. Lacking it, communication would be difficult. It is less clear how much meaning is shared and whether meanings of specific terms undergirding Wilson's analysis (i.e., knowledge, education) are stable across time and space. The ambiguity of terms such as education may function to allow for superficial agreement about difficult issues, so that people can proceed to act without having to settle all differences in advance. The fact that educators can do things vastly different from Wilson's proposals, yet still argue that what they are doing is teacher education, suggests conceptual differences and instabilities in meaning.

The history of science and of general and professional education would certainly support the contention that there are multiple meanings as well as changes of meaning.

Concepts vary also across languages even within the same language groups; German, for instance, has no single conceptual equivalent to "education," supplying instead at least three ways of talking: instruction, upbringing, and the formative development of mind (*Bildung*). Each of these concepts suggests different purposes for teacher education.

Still, Wilson could be right, though not because he (or any person) has special access to what words *really* mean. The important task is not to uncover the essence of words, because even that essence may change over time and across social or cultural groups. The important task, rather, is to find ways to make distinctions that will allow wise consideration of various courses of action. Packing "education" full of social purposes, for example, makes it difficult to consider how each of many separate (possibly competing) purposes might be achieved, and which institutions, or groups, can appropriately be held responsible.

Wilson may also be right in insisting on the importance of meanings that are entrenched in traditional usage. The associations attached to words in use are not easily duplicated (or discarded). If distinctions of importance have been captured in long-established usage, reminding oneself of these distinctions can tap into the tacit convictions and commitments these words call up. Terms newly minted to draw the same distinction are unlikely to match the richness and persuasive power of established terms.

Refuting Skeptical Arguments Against Scholarly Educational Study

Israel Scheffler shares Wilson's skill in unpacking the meanings of educational concepts. (See, for example, his analysis of "teaching" in Scheffler, 1960.) In the article he most directly addresses to teacher education (Scheffler, 1968), however, his argument is based on uncovering implicit assumptions and the logical flaws in an argument, rather than on analysis of concepts. Scheffler considers whether "scholarly and theoretical studies of educational problems" (p. 7) should join practical experience and knowledge of subject matter as a third key component of teacher education. Rather than analyzing a particular paper or policy, Scheffler builds his argument by describing, then criticizing, what he takes to be the arguments of those skeptical about the importance of scholarly studies of education. Scheffler builds a counterargument that not only exhausts the objections of an imaginary skeptic one by one, but also shows that the skeptic's position includes assumptions that, if taken seriously, lead to the position Scheffler advocates.

The skeptic's first argument is that the scholarly study of education should not be a part of teacher education because education is not a science. Until education becomes a science, the skeptic claims, teacher education should concentrate on subject matter and practical experience. Scheffler is willing to admit that education is not a science, but points out that the conclusion depends on an implicit assumption that equates the scholarly study of education with the science of education. This assumption is unwarranted. Education can

be studied in a scholarly manner by using the methods and materials of established fields such as psychology and history. Although there is, in sum,

> no distinctive science or special discipline of education, there are surely multiple modes of analyzing educational problems in a scientific spirit and a disciplined manner . . . . It is . . . the family of university studies, representing the world of science . . . that needs to be brought to bear on the teacher's work. (Scheffler, 1968, pp. 2-3)

The skeptic's second move is to question whether a scholarly emphasis is a *necessary* part of teacher education. "Have we not all known teachers of power and resourcefulness, innocent of educational history and philosophy, ignorant of psychology and the social sciences, and yet capable of transmitting their subjects effectively to the minds of their students?" (Scheffler, 1968, p. 3). In response, Scheffler points out that the power of the skeptic's argument depends on the fallacy of equating what is valuable with what is necessary. The skeptic is justified in pointing out that things necessary for teaching (e.g., subject matter knowledge) should be a part of teacher education. But the skeptic incorrectly extends this argument by assuming that *only* those things necessary to teaching can justifiably be included in teacher education. Surely, Scheffler points out, it is sufficient that scholarly studies enhance the quality of teaching.

> Justification is not, as he [the skeptic] supposes, simply a matter of minimal necessity. It is, rather, a matter of desirability, and a thing may be desirable not because it is something we could not do without, but because it transforms and enhances the quality of what we do and how we live. (p. 4)

The skeptic's next challenge is to ask whether the value of theory should not be judged by its potential for improving the practice of teaching, as seen in improvements in teaching techniques and technology. The skeptic is willing to admit theory, provided it really promises to improve instruction. Again, Scheffler responds by pointing out an implicit, but debatable, assumption in the skeptic's argument. The skeptic equates improvements in educational quality with technical advances in instruction. Technicians work with materials that do not respond in human ways; in particular, they never ask, "Why?"

Teachers, however, work with pupils who may raise questions or doubts about what the teacher is doing. Improved techniques may be sufficient for the technician, but the teacher must be able to respond in a way that will encourage pupils to continue to seek understanding. This requires, in addition to technique, "an ability to reflect critically . . . in the face of the searching curiosity of the young" (Scheffler, 1968, p. 7). The practical payoff of theoretical study of education comes in enhancing this ability.

The skeptic's final challenge is to reject such notions as the ability to reflect critically as overly vague. Nothing should be included, continues the skeptic, unless it can be clearly

operationalized. Scheffler counters by pointing out that the skeptic has committed the fallacy of begging the question. Since theoretical study is by its nature general, rather than specific, assuming that knowledge must be specific is simply assuming the conclusion the skeptic wants.

Scheffler employs another philosophical strategy to provide a second response. He points out that the skeptic has earlier advocated strong subject matter knowledge as part of teacher education. Since such knowledge goes far beyond the content of the school curriculum, the skeptic must be assuming that some general understanding of the subject is also valuable for teaching. If he makes that admission for subject matter knowledge, he should also make it for scholarly study of education.

Looking over his entire series of exchanges with the skeptic, Scheffler notes that the skeptic has repeatedly assumed an overly narrow conception of teacher education and teaching, concentrating exclusively on teachers' task to explain their subjects to their pupils. Scheffler counterposes his own view of teaching, in which teachers serve the community as models of the intellectual virtues. For this larger vision of the teaching role, the importance of scholarly study of education is evident.

Scheffler's article provides clear examples of how philosophical inquiry can raise questions about an argument. Scheffler explicates a version of the arguments dominant in the contemporary discussion, then points out questionable assumptions and logical flaws, particularly flaws produced by taking an unnecessarily narrow view of teaching and teacher education. The strength in Scheffler's approach is that he is explicit about the flaws that he sees and makes clear why he thinks they are flaws.

Scheffler's article also exemplifies some of potential weaknesses with this type of philosophical inquiry. First, by speaking for both skeptic and advocate, Scheffler may not have presented the skeptic's best case. Scheffler has shown the flaws in his own version of the skeptical argument, but might a real skeptic have raised more difficult objections? Second, by concentrating on refuting the skeptic, Scheffler devotes less attention to the positive case that needs to be made for giving attention to theory. Scheffler may have shown that theory could be of value, even though it is not essential. He has not, however, made an overpowering case for including theoretical study in place of some other area that is also a candidate for the scarce time available in teacher education. Why, for example, should a teacher education program devote time to theoretical study, rather than to more field experience or more subject matter study?

Most importantly, Scheffler provides little argument for his fundamental assumption that teachers must do more than get worthwhile content across to students. Scheffler implies

that they have a broader role vital to democracy, but provides no argument for that eminently contestable claim. In Scheffler's view, the teacher

> should be thought of as a man with a calling or vocation committing him to the values of truth, reason, and the enlargement of human powers, dedicated to raising his voice for them, and to shaping the conditions of his work so that these values may flourish. (Scheffler, 1968, p. 11)

This is inspirational, but cries out for the justification and the conceptual unpacking that Wilson did for teacher education.

Arguing From a View of Human Action

Professional philosophers have no corner on philosophical arguments. Though conceptual arguments may be made most often by philosophers, occasionally this way of making a case will be taken up by others in teacher education. Rather than exploring meaning or logic, the psychologist Arthur Combs (1965, 1972), for example, bases his recommendation for teacher education that eschews teaching skills on a conceptual argument about the relative importance of intention and behavior in human action.

He argues (as many philosophers have also argued) that the significant features in human interactions (like teaching) are the interpretations people make, not the specific behaviors they exhibit. A teacher's correction of a child will have different effects, depending on whether the child interprets the correction as an expression of kindly feeling or as a reprimand. Combs presents this as a point needing no support. Although it might be taken as an empirical claim, it is more plausibly a conceptual point--an essential part of interpreting something differently is reacting to it differently, hence differently interpreted actions have different effects.

Combs further argues that teachers' perceptions are more important than their specific behaviors, because the perceptions can guide the selection of action, while specific behaviors have only a limited range of appropriateness. Again, though Combs does not seem to think this point requires argument, this appears to be another conceptual point--specific behaviors have limited appropriateness, because they are specific.

Thus, Combs concludes that teacher education should concentrate on perception and interpretation, rather than on teaching skills.

> If we can be sure the teachers' ways of perceiving are *accurate* [italics added] and constructive, it may not be necessary to know precisely how he will put his concern into effect. There are thousands of ways to express . . . perceptions in action. The crucial question for teacher education is not which behavior but how to bring about appropriate shifts in perception. (Combs, 1972, p. 288)

Invoking accuracy, Comb's conclusions presuppose that a situation calling for teacher action comes, as it were, with one correct perception inscribed into it. Teacher educators have, accordingly, the task of promoting shifts toward that right interpretation.

Comb's analysis illustrates how focused criticism can lead to strong conclusions about teacher education, without the need to conduct or review empirical studies of teaching or teacher education. Combs has drawn attention to a shortcoming in any program of teacher education that rests on training in narrowly defined skills--by that narrowness such skills have a limited range of application, and mere training leaves the crucial question of the appropriateness of action open. Appropriateness, in turn, requires good judgment. Human action is not simply a matter of doing things, but of doing a right thing, in an appropriate manner.

The weakness in Comb's argument is, first, that he fails to consider the likely possibility that any one situation is compatible with multiple interpretations (which may be incompatible with one another); this suggests another more complicated task for teacher educators, namely, promoting--beyond accuracy--openmindedness and flexibility in teacher perceptions. Second, he must assume that teachers who have appropriate ways of perceiving will be able to come up with some ways for translating perceptions into plans of action and for subsequently carrying out their intentions--plans and means that will fit their individual characteristics and the specific situation. The fact that there are thousands of ways to put a concern into effect does not imply that a given teacher will come up with one, or many, or that he will be able to put into practice any of them.

Combs is right in pointing out the narrowness of behavioral approaches to teaching, but narrowness is not the same as worthlessness. Combs is alert to the limits of other positions, but does not seem to have carefully considered the limits and implicit assumptions that weaken his own argument.

Combining Conceptual Analysis With Empirical Claims

Inquiry in teacher education seldom remains purely conceptual. Teaching teachers is a practical activity, hence arguments about what to do cannot completely bypass the real world. Many assertions and arguments blend philosophical and empirical dimensions in ways that may obscure one or the other, making it difficult to assess the overall argument or its components. For example, saying that there is too much reliance on the field component of a program combines information about what is happening in the program (and perhaps research findings about the consequences of field experience) with an evaluative statement presupposing normative claims about what it is that teacher education should be trying to accomplish.

Following are two discussions of teacher education, each advocating a particular focus. They combine reference to empirical claims (some with scholarly support, some not) with

philosophical arguments concerning meaning, concepts, logic, or values. As in the preceding cases, each argument is traced to show how it works. This is followed by comments on strengths and weaknesses.

Advocacy for Teaching Techniques

N. L. Gage probably never thought he was engaged in philosophical inquiry when he began this line of work. Gage is one of the most prominent writers on the results of research on teaching that might be used as curricular content in teacher education. His monographs, *The Scientific Basis of the Art of Teaching* (1978), and *Hard Gains in the Soft Sciences: The Case of Pedagogy* (1985), illustrate how his arguments for the relevance of such research combine the philosophical with the empirical.

Hard Gains begins with a quote from Charles Eliot's 1869 address to Harvard College, which signals Gage's intention to highlight teaching methods as a part of teacher education:

> The best result of the discussion which has raged so long about the relative educational value of the main branches of learning is the conviction that there is room for them all in a sound scheme, provided that right methods of teaching be employed. . . . *The actual problem to be solved is not what to teach but how to teach.* (cited in Gage, 1985, p. 1, italics added by Gage)

Scheffler attempted to argue that scholarly study of education must be added to subject matter and teaching practice; Gage wants to make a similar case for (scientifically based) knowledge about methods of teaching.

Gage recognizes that elevating the place of teaching method in professional preparation represents a departure from tradition. In fact, a crucial part of his argument for focusing teacher education on pedagogy is the claim that past weaknesses in teacher education stem from a neglect of pedagogy. He argues that courses in the foundations of education (perhaps those that Scheffler advocates) do not address students' thirst for knowledge about how to teach and that further study of school subjects is of little value "when the teacher may already know far more about that subject than he or she will ever need in teaching third-graders or even twelfth-graders" (Gage, 1985, p. 27). He appeals to the reader's common sense to justify the claim that possession of strong subject matter knowledge does not necessarily lead to good teaching.

Gage's contention is that students should learn about the techniques of teaching, and, furthermore, that they should learn techniques whose efficacy has strong empirical support.

> Generations of teacher education students have been given inadequate grounding in how to teach. They have not been taught how to organize a course, how to plan a lesson, how to manage a class, how to give an explanation, how to arouse interest and motivation, how to ask the right kinds

> of questions, how to react to students' responses, how to give helpful correction and feedback, how to avoid unfair biases in interacting with students--in short, how to teach. (Gage, 1985, pp. 27-28)

In this initial part of his argument, Gage combines a series of empirical claims (e.g., foundations courses do not tell teachers what they wish to know about how to teach, teachers already know a lot of subject matter, teacher education has seldom included adequate attention to general teaching methods) with conceptual arguments (sometimes implicit) about the importance of teaching method and other assumptions. For example, Gage's claim about teachers' overeducation in subject matter presupposes the belief that teachers need to know only whatever subject matter they typically learn in their other college courses. This implies the further assumption that such subject matter knowledge, if properly delivered, will allow pupils to learn it. (This is an argument that neither Scheffler nor his skeptic would have accepted; much turns on the meaning of "properly" here.) More persuasive is Gage's implicit argument that teachers need to have teaching methods as well as subject matter knowledge. Gage's argument here is simply an enumeration of the various methods that seem obviously important in getting people to learn in the social context of schools--how to organize a course, plan a lesson, and interact in fair and helpful ways with students.

Gage attributes past failure to concentrate teacher education on techniques in part to the lack of a research base. It might be all right to avoid technique if no one had a strong reason for supposing that a particular way of doing something led to worthwhile results. Gage argues, not for emphasis on technique in general, but for emphasis on demonstratedly effective techniques. "That is, (a) teacher education should be aimed at producing (b) the kinds of teacher behaviors that have been shown to be related--preferably causally related--to (c) valued kinds of student knowledge, understanding, sensibility, and attitude" (Gage, 1978, pp. 58-9). Again, the argument is implicit, though not far below the surface. If you want to produce the educational results you desire, you should prepare teachers who can use the skills that produce (or at least are associated with) these results. Cast in this general way, the argument is sound.

Gage devotes a good portion of both monographs to refuting counterarguments to his advocacy for teaching techniques to teachers. The major objections are that professional preparation should not concentrate on teaching techniques because (a) the empirical base for these techniques is too weak, and (b) teaching is much more than (or at least different from) application of technique. Here Gage is using the same strategy that Scheffler did--describing what he sees as the major objections to his position, then showing the fallacies in arguments behind those objections, drawing on his background knowledge about empirical work in education.

Gage finds two faults with the objection that empirical support is too weak. First, Gage points out that recent research has greatly strengthened the empirical base for singling out certain teaching methods as effective. It may have been true that there was not much to draw on, but the situation has changed. Second, Gage argues that critics (and even some researchers) refer to empirical associations discovered by research as "weak" or "small," without giving sufficient attention to the criteria employed in using these derogatory labels. Correlations found between teacher behavior and student learning are typically between .2 and .5; these may be small in comparison to other correlations found in educational research, but they may still be large enough to merit attention in teacher education.

Gage argues that it is an error to assess the worth of research findings simply in terms of either the size of the correlation coefficient or the percent of overall variance explained. Instead, the proper basis for assessment is the benefits likely to be obtained by changes in teaching, as compared with the costs of making those changes. A treatment that reduced bad effects (e.g., dropping out of school) by 33 percent might have a correlation of only .2 with dropping out. If that decline in the dropout rate is worth more than the costs of the treatment, Gage maintains, the treatment would be worthwhile, despite the "low" correlation. He argues that research on classroom management, at least, has already produced results which are well worth the costs of including them in the teacher education curriculum.

Having dealt with the strength of the empirical base, Gage addresses the objection that teaching is much more than application of technique. Gage's response is to admit the claim but to deny that a stress on scientifically grounded teaching techniques is inconsistent with viewing teaching more broadly. Gage's title, *The Scientific Basis of the Art of Teaching*, alludes to the interplay between instruction in empirically based skills and a view of teaching that includes flexibility, judgment, and intuition. Gage's argument here resembles Scheffler's ways of dealing with the skeptic who wished to set a high standard for including something in teacher education, then completely dismissed it if it failed this strict test. Gage thinks that critics of teaching method jump too quickly from the claim that technique is not everything to the conclusion that teaching teachers techniques is irrelevant or miseducative.

Gage (1985) agrees with his critics that teaching cannot, in principle, "be reduced to systematic formulas" (p. 4). But he does not agree that this makes learning about empirical regularities unsuitable for teacher education. Even though no formula can tell a teacher exactly what to do in each specific situation, "statistical results can help a teacher know the averages or trends around which individual cases will vary, and such knowledge can aid in understanding the individual" (pp. 4-5). The statistical averages provide the teacher with a place to begin thinking about how this particular case might or might not fit the most common cases. "Applying that scientific basis in the heat of classroom interaction still relies primarily on artistry. But knowledge of the relevant relationships allows teachers to base

their artistry on something more than hunch, feeling, intuition, unaided insight, or raw experience" (p. 6).

Gage finds that those who deny the value of research based teaching techniques have attractive language for describing teaching but provide little help for novice teachers who wish to improve their teaching:

> References to educational imagination, the orchestration of classroom dialogue, and attention to pattern and expressive nuance--all these resounding statements seem to be saying something important. But the teacher or teacher educator who seeks help from such writing comes away empty-handed. It is easy to tell a teacher to be an artist, but teachers who want to know what they should do to reach that height find few answers in rhetoric about artistry, intuition, and insight. (Gage, 1985, p. 6)

Gage's view of how research results could be incorporated into teacher education is consistent with his view that these results be seen as helpful starting points, not prescriptions to be followed in all circumstances. For both preservice and inservice teacher education:

> teachers should be given the full story: how the research based practices were identified, why they seem reasonable, how they work, and what questions might be raised about their scientific and moral bases. Each teacher should be asked to confront the moral issue of whether these practices can justifiably be rejected on the basis of the teacher's own experience, intuitions, hunches, or predilections. (Gage, 1985, p. 58)

Gage's arguments have several strengths. Like Scheffler's attempts to refute a skeptic, Gage provides a clear description of the position he wants to refute, then makes it easy to see where the flaws in that position lie. Gage's argument is also strengthened by his knowledge of the relevant literature, both that representing his skeptics and that which provides the research base for teaching technique. He uses that knowledge to provide specific examples of teaching technique and why they would be worth including in teacher education.

The weaknesses in Gage's argument lie in what his research base entails about what kinds of pupil learning are valuable and, as in Scheffler's case, in a possible failure to represent his skeptic adequately. Gage presents his general argument in an unexceptionable form--teachers should acquire the knowledge, skills, and dispositions that promote desirable pupil learning. But the move to the conclusion that teachers should learn the skills of effective teaching requires the additional premises that such skills will lead to the desired learning and that "effective" teaching is "good" teaching.

Gage has substantial evidence to bring to bear, provided scores on traditional achievement tests are taken as sufficient indicators of worthwhile learning and good

teaching. Many people might accept this premise and, hence, Gage's argument. The critics Gage appears to address, however, might see these tests as too narrow (e.g., Zumwalt, 1982). Emphasizing skills that promote only these learning goals, they could contend, would lead to a narrowing of the curriculum; gains on these tests might be offset by reduced attention to other important learning goals (e.g., higher order thinking, creativity, emotional growth).

Advocates of teaching as an art might also think that Gage's presentation of their position was weakened by his conviction about the importance of a "scientific" basis for teaching. They might object, for example, to the suggestion that artistry must either be based on science *or* on "hunch, feeling, intuition, unaided insight, or raw experience" (Gage, 1985, p. 6). Gage's list makes the bases of artistry seem no more than individual superstition. Advocates of artistry could make a stronger case for themselves, emphasizing the study and effort that goes into developing artistic performance and sensibility as well as the social bases of artistic standards and traditions.

Advocacy for Subject Matter Knowledge

Like Gage's monographs, Buchmann's writing about teacher education combines analysis of meaning and logic with references to empirical educational research. It is enlightening to compare the two arguments, since they reach different conclusions. Gage argues that teachers need more instruction in teaching techniques, because they already learn more than enough about the subjects they will teach; Buchmann (1982, 1984b) argues that such subject matter knowledge has been neglected in recent American teacher education and that professional preparation puts too much emphasis on techniques like classroom management.

Neither Buchmann nor Gage bases claims about current teacher education practices on studies of the teacher education curriculum. Buchmann, like Gage, relies on what is being emphasized in talks among those in the field. Buchmann cites a particular example of the neglect of subject matter:

> In the 1983 call for papers for the meeting of the American Association of Colleges for Teacher Education, "Essential Knowledge for Beginning Educators," topics include the evaluation of learning and teacher evaluation, instructional planning and management, and the influence of context. Content knowledge is not listed. Who cares for content? This is a disturbing question. (Buchmann, 1984b, p. 30)

In part, the different conclusions reached by Buchmann and Gage spring from different (informal) assessments about the composition of content in current American teacher education.

A more significant basis for disagreement is apparent from Buchmann's discussion of how much and what teachers need to know about the subjects they will teach. Recall that Gage quickly dismissed subject matter knowledge, with no explicit argument. He seems to think that current teacher education provides teachers with more than enough subject matter knowledge. Buchmann's explicit arguments lead to quite a different conclusion.

Buchmann begins with a conceptual argument for the priority of subject matter knowledge as an aim of teacher education. Drawing on analyses by Green (1971) and Peters (1977), she points out that knowledge of the subject being taught is logically required for teaching to occur. In other words, it is part of the meaning of the word, "teaching," that teachers have some knowledge of what is to be taught.

> Teachers who never explain or demonstrate anything, who neither answer questions nor question answers, may be engaged in some useful activity, but they do not teach. . . . [These] . . . activities of teaching presuppose subject matter knowledge on the part of teachers. (Buchmann, 1984b, p. 31)

This logical requirement, however, indicates little about how much subject matter knowledge teachers should have or what its substance should be.

To argue that teachers should acquire a deep and broad knowledge of their subjects, Buchmann draws on empirical evidence to remind readers of conceptual points and supplement her philosophical analysis. Studies of learning have shown the importance of finding out how pupils understand subject matter concepts and of appropriately responding to pupil errors. Buchmann explains that both these tasks logically require a knowledge of subject matter that includes an elaborated understanding of the various aspects of a content domain, so that teachers can recognize inconsistencies in pupil responses and can generate hypotheses about what connections pupils have made incorrectly--or appropriately, though deviating from the textbook. Teachers who cannot trace student thinking in a subject are likely to correct specific answers without addressing deeper confusions; worse still, they might treat appropriate answers or modes of arriving at them as mistaken. Thus, empirical studies support the contention that teaching should go beyond presenting the content that pupils should learn. To further student learning, Buchmann concludes, teachers need subject matter knowledge unlikely to be acquired in current teacher education programs.

Buchmann makes a different assumption than does Gage about what pupils should learn, an assumption that provides a rationale for subject matter preparation that includes knowledge *about* the subject (e.g., its history, social organization, methods of inquiry) as well as knowledge of the subject as explicit teaching content. Citing agreement with other educational scholars, she asserts that pupils need to get a sense of the evidence and arguments that undergird currently accepted, but possibly fallible, interpretations. Teachers

need to give pupils "tutored" uncertainty; that gift requires understanding of the bases and processes of knowledge, not merely its conclusions.

The content knowledge of even a typical undergraduate major in a subject is likely to represent the content as a static body of interconnected facts and principles. Faced with different students, teachers however need a flexible mastery of their subjects, not merely a mastery of the facts and theories that appear in the traditional K-12 curriculum (e.g., Bromme and Brophy, 1986; Floden and Clark, 1988).

> Given the pedagogical requirement for flexible control of subject matter, knowledge of epistemology and history of science is a specific preparation for teaching. Content knowledge of this kind and at this level deepens understanding of knowledge and subject matter, encourages the mobility of teacher conceptions, and yields pedagogical knowledge in the shape of multiple and fluid conceptions. It also contributes to a form of classroom life in which all participants are seen and treated as the potential source of thoughts and actions that make sense. (Buchmann, 1984b, p. 46)

Buchmann specifically rejects the idea that teaching methods should be given greater prominence in the teacher education curriculum. In fact, she attempts to show what payoffs for the "how" of teaching can be gained by thorough preparation in teachers' subjects (e.g., having organized understanding is not unrelated to being able to organize one's thoughts; knowing subject matter to teach allows one to go ahead with instruction and avoid pupil boredom; knowing one's subjects flexibly opens up various entry points for different students). She cites empirical literature indicating that teachers and pupils tend to focus their attention on management rather than on the substance of instruction. She suggests that this tendency may be promoted by gaps in content knowledge that lead teachers to see unexpected pupil answers as potential management problems, rather than as teachable moments. If pupils are kept engaged in learning content, management problems are less likely to arise; but if the teacher sees instruction only as steps to be followed, minor disruptions may spread (cf. Doyle, 1986; Lampert, 1985).

> If the teacher presses forward to new content or responds with care to student understanding, teacher and students will be busy enough with teaching and learning. Under normal circumstances, management is nested in instruction and requires no separate techniques. (Buchmann, 1984b, p. 37)

Buchmann's argument, like Gage's, is strengthened by attention to empirical knowledge about teaching and learning. It is also strong in making explicit the several distinct lines of argument, each of which supports attention to subject matter knowledge in teacher education for different sets of reasons. With multiple arguments, she may be able to maintain her conclusions even if one or another argument is shown to be weak or faulty.

Like Gage's argument, this argument depends, however, on debatable assumptions about what sort of learning is most desirable for pupils. Gage's reliance on achievement test scores is not given much defense in his monographs, but he would have little difficulty citing large numbers of citizens, politicians, and school personnel who would endorse his assumption. Buchmann defends her assumption through reference to educational scholars and through appeals to the values of her readers. In both cases, readers who disagreed with the assumptions about desired learning would have good cause to question the conclusions.

Buchmann's argument has a further weakness in its reliance on the links between teachers' content knowledge and the learning Buchmann hopes will occur. Though she makes a plausible case for the existence of such links, no research is yet available to provide empirical support. The few studies that have been done examining the connection have neither conceived of subject matter knowledge in the way that Buchmann does (they typically merely count the number of college courses completed) nor measured the pupil learning she considers most important.

Basing Recommendations on Appeals to Background Knowledge

The arguments considered in the preceding section drew on empirical studies in building an original philosophical argument. Just as these used empirical work already accomplished, so other arguments draw on philosophical analyses and literature. In both cases, the authors do not pretend to reproduce the complete argument leading up to the conclusions or ideas they invoke. Rather, they remind the reader of these ideas in the course of making a plea for further action.

Bringing Writings on the Human Condition to Bear on Teacher Education

Maxine Greene (1981) draws on the ideas of philosophers, novelists, poets, and others, to argue for the importance of foundational studies in teacher education. Her plea for a return to an emphasis on *education* makes extensive use of her broad background knowledge of contributions to thought about the human condition, encompassing both American and European societies. It is somewhat misleading to call Greene's plea an argument. Though she does provide some reasons for an emphasis on educational foundations, the main force of her essay stems from her evocative reminders of how other thinkers have provided insight into human nature. Throughout the piece, Melville and Whitman share their place with Dewey and Scheffler as supporters of Greene's position. But Greene does not ask the reader to believe anything simply because Dewey or Melville said it. She relies instead on the assumption that her statements about society and education will strike such a responsive chord in the reader's mind that no further argument will be needed. She does not ask the reader to come around to her point of view; she asks the reader to recollect what has been submerged in the press of modern life.

A sketch of Greene's position robs it of some of its power, but such a sketch can be helpful in clarifying how she tries to reach her audience. She thinks that social conditions such as inequality and the preoccupation with efficiency make it difficult for people to see what they ought to do. Though education has limited power, schools still

> have a particular responsibility when it comes to empowering persons to live in this world. To be an educator is intentionally to move people to what are conceived to be more desirable states of mind, to bring them to care about what is significant and worthwhile. (Greene, 1981, p. 31)

To be such educators, teachers

> must be empowered, educated to enter into the discussion of what the schools are for. They must be given the resources they need to articulate and to incarnate the shared norms that ostensibly sustain our society: justice, equality, concern, freedom, mutuality, rationality, decency. (p. 33)

The content of educational foundations (e.g., educational psychology, philosophy of education) is well suited to initiate teachers into these resources and ways of thinking; hence it should be maintained as an important part of teacher education.

Greene lays out this position through a narrative that mixes statements of presumably shared values with examples and quotations from philosophy and literature. The result is a powerful plea for a return to many of the values in education and teacher education articulated by John Dewey and others. Another result is that people may be moved to inquire into their own minds and experiences, which is an aim held by philosophers from philosophy's very beginnings, and one that supplies much of the point of ordinary language analysis. The approach to philosophical writing in Greene's article stands in marked contrast to the pieces considered earlier. Greene makes a case that many will probably find convincing; but she provides little in the way of explicit argument. The power of her case rests rather in the extent to which she is, indeed, able to call on background knowledge, shared with her audience, that makes the case or provides the telling illustration.

To illuminate the importance of posing fundamental questions about education and society, for example, Greene runs through a list of examples of real and fictional characters who have posed such questions--Thomas Jefferson, Horace Mann, Huck Finn, and the ship's officers in *Billy Budd*. It is assumed that the reader recognizes that all these people raised such questions, and that they were *right* to do so.

To show that teachers must ask questions about the psychology of the pupils they teach, Greene calls on the reader to imagine the difficulties a teacher without psychological understanding would have with characters from literature:

> How are we to release the preferences of the Holden Caulfields we come upon, the Yossarians, the women like Lily Bart in Edith Wharton's *House of Mirth*, or the woman desperate to read Chekhov in Tillie Olsen's *Tell Me a Riddle?* (Greene, 1981, p. 34)

Perhaps the key to the persuasive power of Greene's article is her own obvious understanding and conviction. She has draws on an impressive assemblage of insights in arriving at her position; her tone communicates the feeling and conviction with which she holds that position. Greene's approach is especially well suited to the difficult philosophical task of helping people recollect the convictions they share. Often, no neat chain of logical argument lies behind these convictions, or the chain of reasons simply ends with them. They are more a matter of common moral intuition and faith, either religious or secular. Because the basis for these convictions is substantive belief, not logic, philosophers cannot use arguments to recall them. Instead, philosophers must do what Greene does, evoke shared ideas or images, and point out what the reader already seems to see in them. These ideas or images encapsulate, or gesture at, human wisdom and hope.

Such philosophical writing can be problematic in at least two ways. First, the examples, presumably shared texts and ideas, may not be familiar to the readers, or readers may not find in them what the writer does. Some members of Greene's audience may not remember enough about *Huckleberry Finn* to make the work a persuasive illustration; or they may have no idea about the identity of Holden Caulfield or Yossarian. For those people, the article may fall flat, for it loses its persuasive power. Still, readers not able to interpret every single one of Greene's allusions are not bound to find their reading barren, being moved perhaps by her impassioned tone to some hazy, misty ideas of human truths.

A more fundamental problem is that, because it offers little in the way of argument, it may be difficult to evaluate such writing appropriately. Someone could mount a persuasive case that did not, in fact, invoke shared values. Or the case might be based on attitudes widely shared, but pernicious--racism or bigotry. Greene is guilty of neither of these evils, but the approach taken in her essay calls for acceptance of her plea, rather than for the further discussion she undoubtedly values. In this kind of philosophical writing, the reader must rely greatly on the good faith of the author, a condition that, of course, must always be met to some extent.

Elaborating Dewey's Vision of Reflective Teaching

Like Greene, Zeichner draws on his background knowledge to call on teacher educators to embrace a vision of their work, a vision he assumes his readers already find appealing. Zeichner and Greene both accept John Dewey as an eloquent spokesman for this vision, but Zeichner draws on educational research--not on literature--to convince his

audience that Dewey's ideas merit attempting to use them as guiding principles. Zeichner's use of empirical research makes his approach also similar to that of Buchmann and Gage.

An emphasis on reflection as a central goal of teacher education runs through most of Zeichner's work. Some articles state or assume this position, with little attempt to persuade readers to adopt it. A recent article with Liston in the *Harvard Educational Review* for example, describes the vision that guides their work as teacher educators. The article emphasizes

> the preparation of teachers who are both willing and able to reflect on the origins, purposes, and consequences of their actions, as well as on the material and ideological constraints and encouragements embedded in the classroom, school, and societal contexts in which they work. These goals are directed toward enabling student teachers to develop the pedagogical habits and skills necessary for self-directed growth and toward preparing them, individually and collectively, to participate as full partners in the making of educational policies. (Zeichner and Liston, 1987, p. 23)

Zeichner's most explicit argument in support of reflection as a goal of teacher education can be found in his earlier work on field-based experience in teacher education. In "Reflective Teaching and Field-Based Experience in Teacher Education," Zeichner (1981-82) questions the widespread trust in field-based experience in teacher education, stressing that such experience can be judged only by giving careful attention to its purposes. His review of evidence about the effects of field experience shows that it tends to contribute to the development of utilitarian teaching perspectives:

> Specifically, as students spend time in the field, getting the class through the required lesson on time in a quiet and orderly manner becomes the major criterion for accepting or rejecting the use of a particular teaching activity. If a technique "works" (that is, solves the immediate problem at hand), it is evaluated as good for that reason alone. (p. 3)

Zeichner then systematically considers the goals of field experience. He uses two approaches to persuade his readers that the typical effects of field experience imply undesirable ends.

First, Zeichner reminds his readers of John Dewey's description of the purposes field experience ought to serve. Zeichner quotes passages from the 1904 article (discussed later in this paper) in which Dewey characterizes the utilitarian perspective as a danger to be avoided, advocating instead that "practical work should be pursued primarily with reference to its reaction upon the professional pupil in making him a thoughtful and alert student of education" (Dewey, 1904/1965, p. 150). Like Greene, Zeichner uses these passages to help his readers crystallize their own inclinations toward an ambitious approach to teacher

education. He provides additional reminders of the goals held in common by citing other teacher educators who subscribe to Deweyan aims.

Second, Zeichner elaborates and defends his own adaptation of these goals. Teachers who are thoughtful and alert students of education, Zeichner explains, have both the skills necessary to study and solve classroom problems and the attitudes or qualities of mind that run counter to utilitarian perspectives. Drawing again on Dewey, he describes the desired attitudes as openmindedness, responsibility, and wholeheartedness; as teacher characteristics, these qualities resemble Wilson's requirement for "seriousness" in learning to teach and learning from teaching.

Zeichner, like Greene, attempts to persuade by evoking and interpreting a vision of teacher education with which the audience is assumed to be familiar and sympathetic. His elaboration suggests how readers might embody Dewey's proposals in their practice. Zeichner also draws on the empirical literature to convince his readers that bringing this vision to life requires serious effort, yet remains possible. He cites studies showing that the desired attitudes are comparatively rare among experienced teachers; hence intervention (education, Wilson would claim) is necessary if they are to be learned. "Teachers for the most part do not seem to be especially reflective or analytic about their work. On the contrary, 'reflexive conservatism,' the antithesis of reflective thinking, seems to be the central tendency in the profession" (Zeichner, 1981-82, p. 9).

By posing and refuting pessimistic claims that such attitudes either could not be developed or would interfere with teachers' ability to respond to the rapid pace of classroom events, Zeichner attempts to show that the vision is within reach. Reflective teaching is possible because some teachers do it. Furthermore, the fear that reflective teachers would be paralyzed rests on a mistaken interpretation. "To imply that reflection is incompatible with the ecology of the classroom is to distort the true meaning of the reflective process" (Zeichner, 1981-82, p. 10). Most important, objecting to reflection on the grounds that it impedes classroom processes begs the question of the relative merits of reflective and utilitarian perspectives. Reflection is valued *because* it interrupts the smooth flow of events.

Zeichner's argument is, like Greene's, strengthened by his reference to the ideas and conclusions of other scholars. It is also strengthened by his own evident understanding of the concrete details of teacher education. Because he draws on a small set of educational thinkers for ideas about the aims of teacher education, Zeichner can be more assured that his readers will have some familiarity with those he cites--especially with John Dewey. Yet that same restriction keeps Zeichner's essay from having the same depth of insight that affects one in reading Greene's plea. Greene gives the impression of drawing her conviction from fundamental insights into people and society; Zeichner rests his case more on convictions that operate within the practice of education.

Zeichner's approach runs the risks Greene's does. Though he offers rather more in the way of empirical support, he relies heavily on a shared and largely unexamined belief in the validity of Dewey's convictions about education in general, and teacher education in particular. He thus has limited power to change the minds of those who might oppose Dewey, and he provides only a limited invitation for readers to continue and redirect the discussion.

Establishing Distinctions to Make a Point

In analytically ordering the world, people draw systematic distinctions. One important philosophical strategy is to point out that what seems to be a straightforward concept can be looked at in different ways, or is made up of several different elements, which may be related, but are not interchangeable. One can unpack the concept of education to find that it contains ideas of learning coming, so to speak, from the "inside" (maturation, development) and from the "outside" (instruction, training). Such distinctions confer greater clarity and complexity on a situation or question such as, How do we educate teachers? Some of the conceptual elements may be more appropriate or desirable than others, and current practice may take for granted one interpretation to the neglect of others.

Scholastic philosophy has given this analytic strategy a bad name through a proliferation of dry distinctions. It is sometimes not easy to convince people to attend to differences between seemingly similar ideas. Often, therefore, the bulk of an argument positing distinctions lies in persuading the reader that differences are real and significant. To make this case, authors will often "unpack" an idea or practice. Next, two cases are examined, one in which the concept of teacher knowledge is unpacked to show its multiple components, another in which two distinct ways of looking at classroom experience as part of teacher preparation are compared in terms of associated aims and likely outcomes.

Distinctions Within Teachers' Knowledge

Teachers' knowledge of subject matter provides a clear example of an apparently simple idea that can be separated into a variety of distinct components. Buchmann, in the essay discussed earlier (1984b), discusses some such distinctions. Shulman (1986) provides a more extended analysis of this idea. Like Buchmann, he thinks that teachers' subject matter knowledge should go beyond simple additions to their mastery of the facts and skills of the discipline.

> Teachers must not only be capable of defining for students the accepted truths in a domain. They must also be able to explain why a particular proposition is deemed warranted, why it is worth knowing, and how it relates to other propositions, both within the discipline and without, both in theory and in practice. (Shulman, 1986, p. 9)

Shulman does not argue as elaborately as Buchmann for the centrality of content knowledge, relying instead on a combination of its self-evident importance and an analogy to the importance of content knowledge in medicine. But he goes beyond Buchmann in the variety of distinctions he draws within this domain of teachers' knowledge, as well as between this domain and closely related aspects of teachers' knowledge. He then uses these distinctions to argue that the attention of researchers and teacher educators has rested too much on a single aspect of content knowledge.

First, Shulman distinguishes content knowledge *per se* from *pedagogical* content knowledge and from curricular knowledge. The first and last are the familiar knowledge of the subject (including how knowledge is supported and how it changes) and knowledge of the range of methods and programs available for teaching particular domains and topics. Pedagogical content knowledge, however, is the area of knowledge that sets teachers apart from other experts; it is composed of understandings of content related to its teachability. This includes both the ways of representing content that makes others able to understand it--"the most powerful analogies, illustrations, examples, explanations, and demonstrations" (Shulman, 1986, p. 9)--and insights into what makes learning specific aspects of a subject easy or difficult (e.g., common misunderstandings and preconceptions).

Within each of these domains, Shulman describes three forms of knowledge: propositional knowledge, case knowledge, and strategic knowledge. Propositional knowledge is the form currently dominant in teacher education, for example, knowledge that direct instruction promotes certain types of learning, or that beginning teachers should not smile until Christmas. Shulman suggests that teacher educators should give attention beyond that to two other forms of knowledge--case knowledge and strategic knowledge (knowing how to adjudicate when different propositions or cases disagree).

Shulman argues for the importance of these additional forms of knowledge on the grounds that propositional knowledge alone is difficult to remember and difficult to apply in complex and variable settings. Case knowledge aids memory and application by providing examples that vividly exemplify one or more chunks of propositional knowledge. Strategic knowledge is, by definition, the form of knowledge that guides the teacher in resolving conflicts that inevitably arise in applying several principles, maxims, or norms to a particular situation (e.g., when the principle that unusual student responses should be probed conflicts with the principle that the pace of the lesson should be maintained).

Shulman then goes on to distinguish three types of knowledge in each of these categories, based on whether that knowledge comes from disciplined inquiry, practical experience, or ethical analysis. Thus "don't smile until Christmas" is propositional knowledge derived from experience; detailed knowledge of a how an effective teacher begins a typical lesson could be case knowledge that comes from disciplined inquiry. By using memorable labels for each subcategory of knowledge, Shulman helps the reader keep track of the

complex array of types of knowledge by which he has replaced the simple idea of teachers' content knowledge. That knowledge can now be sorted into principles, maxims, and norms (all propositional); prototypes, precedents, and parables (all case knowledge); and so on. Shulman uses this system of categories and subcategories to argue that some aspects of teachers' knowledge (e.g., all forms of case knowledge) have been neglected in research and practice. In order to make that point understandable, let alone convincing, he has to show that content knowledge is not all of a single type.

The strength of any attempt to make distinctions depends the extent to which the distinctions appear clear (i.e., the reader must get an idea about what falls into each category, and why) and significant (e.g., that items in different categories highlight different insights or have different consequences). Explanations of the distinctions are of help here, as are good examples. Shulman's case is strong in these regards. The explanations are clear and the examples are consonant with practitioners' knowledge and experience. They also fit clearly into the categories. Take, for instance, his discussion of maxims--propositional knowledge drawn from practice:

> The second kind of proposition makes not a theoretical claim, but a practical one. In every field of practice there are ideas that have never been confirmed by research [i.e., are different from the knowledge based on disciplined inquiry] and would, in principle, be difficult to demonstrate. Nevertheless, these maxims represent the accumulated wisdom of practice, and in many cases are as important a source of guidance for practice as the theory or empirical principles. "Never smile until Christmas" would qualify as such a maxim, as would "Break a large piece of chalk before you use it for the first time, to prevent squeaking against the board." (Shulman, 1986, p. 11)

By pointing out that these maxims, while a good source of guidance, are typically overlooked, Shulman makes a good case for his distinction. The distinction makes it possible to identify a valuable yet neglected source of knowledge for teaching.

Shulman's argument might be faulted in that some cases seem to fall into more than one category. Propositional knowledge based on scholarly study of the ethics of teaching, for example, seems to fit as both a principle and a norm, since it is based both on disciplined inquiry and on ethics. And might not, as Dewey would claim, some practical experience be disciplined? These difficulties may not be very serious; few distinctions are sharp once applied to real cases. Still, when the borderline or ambiguous cases begin to outweigh the paradigm cases, the utility of a distinction is in jeopardy.

More important is the question, Why these distinctions, categories and subcategories, and not others? Zeichner draws on Dewey's thought, with its comprehensive reconstruction of most ideas and activities people take for granted (e.g., academic knowledge, acting, thinking). Wilson points to ordinary language with its implicit system of relevances and

meanings. Shulman bases his distinctions on plain thinking, philosophy, and many studies of teaching and professional decision making. Yet, in positing a category *system*, one also needs (theoretical) principles by which distinctions within it are justified. Otherwise, they may simply remain lists of words with definitions and subdivisions, difficult to evaluate. The power in a distinction, or in a category system, lies in the further insights or arguments it permits. The advantage of Shulman's analysis is that it draws on a variety of different sources, throwing elements of teacher knowledge into relief. It will take further empirical and philosophical work to assess the relative importance of these components and to see what this system still leaves out.

John Dewey: Scientific Thought in Teacher Education

John Dewey's classic essay on teacher education, "The Relation of Theory to Practice in Education" (1904/1965), relies on a distinction rooted in Dewey's theory of learning and knowledge. While Shulman makes multiple distinctions to call attention to neglected possibilities in teacher education, Dewey establishes in essence one, invoking his whole system of thought about education (and democracy) in so doing. Dewey describes what he considers the relation of theory to practice in a three-part argument. The first two parts consider practice and theory, respectively, from the vantage point of the distinction between apprenticeship and laboratory approaches to practical work in teacher education. The third part suggests how Dewey's ideas might be put into practice, in the historical context in which he wrote.

The driving distinction opens the section on practice. The question about practice is not, Dewey says, *whether* it should play a part in teacher education, but *what purpose* practical work should serve. He posits two contrasting sets of purposes as two poles of a continuum; these are embodied in his distinction:

> Two controlling purposes may be entertained so different from each other as radically to alter the amount, conditions, and method of practice work. On the one hand, we may carry on the practical work with the object of giving teachers in training working command of the necessary tools of their profession; control of the technique of class instruction and management; skill and proficiency in the work of teaching. With this aim in view, practice work is, as far as it goes, of the nature of apprenticeship. On the other hand, we may propose to use practice work as an instrument in making real and vital theoretical instruction; the knowledge of subject matter and of principles of education. This is the laboratory point of view. (Dewey, 1904/1965, p. 142)

Of course, if teachers are immediately saddled with full responsibility for a class of (in Dewey's times) 30 to 60 pupils, they would have difficulty developing the habits of mind essential to learning from practice. Though Dewey makes various claims about the

consequences of both approaches, he neither provides empirical support for the superiority of the laboratory approach, nor claims to analyze ordinary language concepts. The considerable persuasive power of this essay comes instead from a heady mix of vivid imagery and plain thinking, permeated by a sweeping theory of human thought that puts science within the reach of every person wanting to know and act rightly.

For Dewey, scientific thinking is the appropriate model for all thought. He believes that people's minds are impelled by problems motivating inquiry. Outcomes of inquiry provide a basis for tentatively resolving problems and for carrying out further, more systematic, inquiry. Looked at properly, Dewey contends, all scientific knowing can be linked to problems originating in concrete experience. He accordingly believes that teachers can think scientifically about their work and connect it to scholarship as well. Moreover, using scientific methods of thought themselves, teachers can and should teach in ways that can help their pupils practice inquiry.

From this conception of scientific thought comes Dewey's idea of what teaching practice should accomplish and how psychology (as an example of foundational knowledge) and subject matter knowledge can contribute to these goals. Thus Dewey is no advocate of research utilization as the term is understood in much of current educational usage. Whereas Gage's call for research-based preparation in teaching techniques, for instance, emphasizes the sensible use of externally grounded findings, Dewey's call for a laboratory approach emphasizes intellectual activities that turn teaching practice into science, requiring thinking about aims of education and a deep knowledge of teaching subjects.

In the section on practice, Dewey lays out three lines of argument for the laboratory approach. First, he points out that, historically, more established professions have moved toward the laboratory approach and away from training in specific skills, because professional education can better help people acquire the "scientific foundations" (Dewey, 1904/1965, p. 145) of their work. Second, in teacher preparation the apprenticeship approach encourages inordinate attention to classroom management. Third, this approach encourages novices to use whatever methods seem to yield immediate results in limited goals rather than to try to understand how fundamental principles might inform and shape teaching practice over time, in terms of examined and more broadly conceived goals.

In the second part of the essay, Dewey asks, "What must be the aim and spirit of theory in order that practice work may really serve the purpose of an educational laboratory?" (Dewey, 1904/1965, p. 152). He approaches the question by considering how theory might avoid being abstruse and apparently useless, for the laboratory approach cannot rely on practice teaching for motivation and illustrative examples. Psychological theory, for example, can be linked to student teachers' own experiences as learners. It is a mistake, Dewey claims, to assume that delaying full-fledged teaching means leaving student teachers without relevant experience. People are learners their whole lives, hence student teachers

have "a very large capital of an exceedingly practical sort" (Dewey, 1904/1965, p. 153) that they can draw upon for illustrations of psychological theory.

Dewey thus takes a different view of the importance of psychological theory than do other advocates of the discipline, such as Gage or Scheffler. For Dewey, psychology provides concepts and methods of thought that teachers can learn to use when reflecting on learning, both inside and outside the classroom. For Gage, research provides evidence of the typical causal relationships between teaching and learning, which teachers can use as a starting point for decisions. While Dewey thinks that experience is needed to help teachers apply psychological thinking in observing themselves and their students, Scheffler seems to make the counterintuitive assumption that studying psychology is sufficient--relating scholarship to practice will take care of itself.

For teachers' knowledge of subject matter, Dewey makes a more striking claim--that knowledge of subject matter (properly conceived) provides knowledge of teaching method. This is something Buchmann also tried to argue. Again, Dewey's assertion is based in the centrality of having teachers and pupils learn the methods of scientific thought. To argue that subject matter knowledge is valuable for both intellectual and teaching method, he gives an old argument a new twist. Everyone knows that some professors are good teachers, though they have never studied pedagogy. The usual conclusion is that knowledge of teaching methods is of little value. Dewey, however, concludes that subject matter knowledge itself provides *some* knowledge of teaching method; and that it is, moreover, a resource that should be tapped more fully:

> If it has accomplished so much when working unconsciously and without set intention, have we not good reason to believe that, when acquired in a training school for teachers--with the end of making teachers held definitely in view and with conscious reference to its relation to mental activity--it may prove a much more valuable pedagogical asset than we commonly consider it? (Dewey, 1904/1965, p. 159)

Dewey goes on to explain his view of how method is embodied in subject matter; learning subjects is, at its best, learning the

> fundamental mental attitudes and operations--that, indeed, particular scientific methods and classifications simply express and illustrate in their most concrete form that of which simple and common modes of thought-activity are capable when they work under satisfactory conditions. (Dewey, 1904/1965, pp. 161-2)

If this is so, then knowledge of teaching subjects brings with it an understanding of how minds ought to work. For Dewey, knowledge of subjects equals knowledge of inquiry *and* knowledge of the educational process, as he conceives it.

In the final section of the essay, Dewey considers the feasibility of his proposals, sketching various steps a student teacher might go through in practice teaching, even allowing for some apprenticeship during a final stage. Dewey concludes with an inspirational challenge, laying responsibility for great changes on the shoulders of teacher educators and reminding them that adopting the laboratory approach requires more than mere refinement of current practice:

> The thing needful is improvement of education, not simply by turning out teachers who can do better the things that are now necessary to do, but rather by changing the conception of what constitutes education. (Dewey, 1904/1965, p. 171)

By contrasting the laboratory and apprenticeship approaches, Dewey makes one see the experiential component of teacher preparation in a different light, calling into question common practices and assumptions. Rather than accepting a distinction between theory and practice, Dewey unites both in the laboratory image of teacher education. This powerful idea, invoking Dewey's view of the nature and value of science and thought, has affected the thinking of many scholars and practitioners in teacher education.

Much of the appeal of Dewey's argument, communicated specifically in the work of Zeichner and his associates, stems from visualizing teachers' thinking scientifically (in Dewey's sense) and spreading these same habits of mind through classrooms, schools, and, as Greene and Scheffler would join in hoping, through a society thus becoming truly democratic. Perhaps these writers all overestimate the power of schools--even when teeming with reflective teachers--in competition with other institutions and social agencies, such as families, the media, and political institutions.

Conclusions

In a sense, all of the philosophical inquiry commented on tells a story. Each partial story responds to ideas and realities, to thought and practice (mostly in the United States), and each looks, as it were, backward and forward: to comprehend or correct past ideas and practices, leading to the present, and to shape new understandings and intentions. Perhaps it is not even true that what eventuates in this dialogue with ideas, social realities, and one's own mind is new as a contribution to the philosophical conversation about teacher education. Rather, there are reminders of elements that seem to have been neglected, parts of the puzzle of teaching teachers that have been temporarily mislaid.

Thus, Wilson calls for taking a hard look at the concepts of education and teaching before one rashly crowds out or distorts educational goods by demanding too much of schooling. In tracing Scheffler's argument, one is taught to consider carefully any narrow view that assimilates teaching to technical work on unresponsive material. Related to this,

Combs' argument drives home the point that teaching is more than a set of effective methods; it is fundamentally human action--cognitive, interpretative, and personal.

Partisans of teaching technique and subject matter preparation in teacher education, such as Gage and Buchmann, respond to the same historical reality, drawing conclusions which vary according to the educational goals they assume as a starting point. Greene recalls human truths and the hopes of this republic in making her appeal for helping teachers learn to raise fundamental questions. Zeichner reminds teacher educators of the efforts they must make to prepare reflective teachers.

Philosophical inquiry expands and challenges ways of looking at the world by establishing distinctions. Shulman posits a rich variety of ways in which teachers might know their subjects and their work. Based on his distinction between apprenticeship and laboratory views of teaching practice, Dewey argues for a way of seeing teacher preparation in which the distinction between theory and practice vanishes.

Each of the authors' perspectives and arguments illuminates only parts of the puzzle, taking others for granted and leaving out the rest. This could not be otherwise, for examining the normative and conceptual underpinnings of a social practice is like repairing a ship at sea. Only a few parts can be prized out at any one time. The rest must remain in place, even though this means the entire analysis is always in some ways imprisoned by given beliefs and concepts.

Every inquiry has shortcomings and questionable assumptions. Each attempt to understand and reform teacher education is liable to overestimate the importance or trustworthiness of one thing at the expense of others. Is education really something that can be nailed down once and for all by conceptual analysis, or is it--to use Wittgenstein's (1958) image--more like a slowly shifting riverbed? Does it make sense to saddle teachers with the burden of being the prime representatives of intellectual and civic virtues or should this task be shared with other groups? Perception is surely important in teaching, but specific behaviors most certainly also affect pupils and situations are never susceptible to only one interpretation.

The presence of weaknesses in all arguments is well exemplified by the partisan arguments we have reviewed; of course, both the "how" and "what" of teaching matter, and preoccupation with one or the other can put thought and action on a false scent. In particular, one must consider what is entailed for educational goals by an emphasis on technique in teacher preparation and must not ignore the fact that school learning is not just an effect of teachers' subject knowledge but a *social* production, accomplished by teachers and students acting and thinking in concert with one another.

When drawing on background knowledge in evoking a vision and making recommendations, the question is not only to what extent the knowledge or vision is, in fact, shared, but also to what extent it is justified by reason or evidence. Intersubjective

agreement does not guarantee truth or rightness, and visions, just as evidence, may be questioned. Likewise, when conceptual distinctions are posited, one needs to comprehend not only definitions, but also the (theoretical) principles of generation accounting for their point, and for the whole framework.

This paper provides illustrations of how philosophy enters into inquiry in teacher education. Its tools and questions are no privileged possession. Philosophical inquiry allows for a variety of partial views, activities and kinds of knowledge. But neither are all perspectives of equal merit nor all views of teaching and teacher education equally defensible. The authors reviewed were all, in their different ways, trying to argue for their insights and proposals in responsible ways, respecting their readers' right to be given reasons for beliefs or actions. They varied in the kinds and mix of reasons they offered for consideration (invoking concepts, logic, common sense, empirical evidence, shared ideas), and they varied, similarly, in their use of philosophical methods or strategies of persuasion. All of the arguments left the reader with more questions to be asked, and with uncertainties yet to be resolved.

These philosophical analyses show that the argumentative ladder on fundamental questions has no end. In thinking about teacher education, direction always remains to some extent unclear, and any one decision or perspective may dissolve on the adding of further theoretical, factual, or value premises. If one looks at a situation in a different light (theory), or brings other facts and values to bear on it, one will come up with a different practical answer or a different idea may suggest itself. However, the argumentative ladder on teacher education is placed somewhere and cannot be shifted around at will or whimsy, for teaching teachers has to do with education and teaching youngsters in schools. It is thus committed in conceptual and institutional terms. This should function to orient and bound discussion.

Importantly, these analyses are a reminder of the very special place teachers have in thoughts about how to promote social (not only educational) goods. But there remain grave uncertainties about how to accomplish the task, central to teaching, of helping people learn. In teacher education thought and practice it is ill advised to be an initiate of one ideological camp or other--being "for" conceptual analysis, teaching techniques, education of teacher perceptions, or what have you. Doing so only debars one from other valuable insights and from seeing the limits of a given perspective. Good ideas and practices are too scarce in any domain of human endeavor to dismiss any of them lightly.

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